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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/935,355      | 08/22/2001  | Wolfgang Ecker       | L&L-10051           | 1679             |

24131 7590 06/08/2004  
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EXAMINER

KENDALL, CHUCK O

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2122

DATE MAILED: 06/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

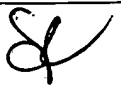
## Office Action Summary

**Application No.**

09/935,355

**Applicant(s)**

ECKER ET AL.

**Examiner**

Chuck Kendall

**Art Unit**

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08/22/2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4.5 &amp; 6</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This action is in response to the application filed 08/22/01.
2. Claims 1 – 40 have been examined.

**Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 4, 6 – 14, 16 – 23 & 27 – 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Brisson USPN 5,487,147.

Regarding claim 1, Brisson a method for revising a computer program, which comprises:

providing a computer program written in a programming language in a computer;  
prescribing consistency, syntax, grammar, and lexical rules (5:17 – 30);  
searching the computer program initially for infringements of the prescribed consistency, syntax, grammar rules, and lexical rules (FIG.1, 120, see parse generator, for parsing (searching/locating));  
for an infringement of a prescribed rule, calculating a possible correction in the computer program (5: 30 – 38); and  
changing the computer program in accordance with the calculated correction (8:50 – 56, see error recovery and revises).

Regarding claim 2, the method according to claim 1, which further comprises, for an infringement of a prescribed rule, calculating a plurality of possible corrections of the rule infringement in the computer program (9:3 – 10, see intelligent selection of one of them and recovery from error).

Regarding claim 3, the method according to claim 2, which further comprises, for an infringement of a prescribed rule, automatically selecting a correction option from the plurality of correction options (9:3 – 10, see intelligent selection of one of them and recovery from error).

Regarding claim 4, the method according to claim 2, which further comprises, for an infringement of a prescribed rule, interactively selecting a correction option from the plurality of correction options (3:47, also see 4:65 – 5:10).

Regarding claim 6, the method according to claim 1, which further comprises: searching the computer program for infringements of prescribed rules actually as the computer program is gradually input (8:50 – 55, see within input string); and automatically correcting a prescribed type of infringement before the inputting has been completed (9:3 – 10, see recovery from error for correcting)

Regarding claim 7, computer program product version of claim 1, see rationale as previously discussed above.

Regarding claim 8, which recites similarly to claim 7 and is the computer program product stored on a medium suitable for computers, see claim 1 for reasoning.

Regarding claim 9, programmed data medium version of claim 1, see rationale as previously discussed above.

Regarding claim 10, the system version of claim 1, see rationale as previously discussed above.

Regarding claim 11, which recites similarly to claim 10 and claim 1, see reasoning as previously discussed above.

Regarding claim 12, which is the system version of claim 2, see rationale as previously discussed above.

Regarding claim 13, which is the system version of claim 3, see rationale as previously discussed above.

Regarding claim 14, which is the system version of claim 4, see rationale as previously discussed above.

Regarding claim 16, which is the system version of claim 6, see rationale as previously discussed above.

Regarding claim 17, which discloses similar limitations as in claim 1, see rationale as previously discussed. And regarding ignored infringements see (9:10 – 20, for ignore see skipped).

Regarding claim 18, the method according to claim 17, which further comprises defining the ignored infringements by virtue of a categorical specification of the Infringement (9:40 – 50, see set of synchronizing symbols, also refer back to lines 10 – 20, for skipping).

Regarding claim 19, the method according to claim 17, which further comprises defining the ignored infringements by virtue of a generalized specification of the Infringement (9:40 – 50, see set of synchronizing symbols, also refer back to lines 10 – 20, for skipping).

Regarding claim 20, the method according to claim 17, which further comprises defining the ignored infringements by virtue of a hierarchical specification of the Infringement (11:35 – 50, for hierarchical specifications see showing using tree like structures).

Regarding claim 21, the method according to claim 17, which further comprises defining the ignored infringements by indicating a declaration environment of the infringement (10:50 – 65, for declaration see "...defined earlier...").

Regarding claim 22, the method according to claim 17, wherein ignored infringements are defined by specifying an area or context of a construct (9:10 – 15, for area see stack).

Regarding claim 23, the method according to claim 17, wherein ignored infringements are defined by specifying regions of the source code of the computer program, the regions being defined by indicating:

lines and columns (8:34 – 36, see line number and position);

starting lines and ending lines and starting columns and ending columns (8:34 – 36, see line number and position);

nodes in a parsing/syntax tree (9: 33 – 37, see children and parent nodes);  
starting nodes and ending nodes in the parsing/syntax tree (9: 33 – 37, see  
children and parent nodes); and

a path in the parsing/syntax tree(11:35 – 40, see parse tree).

Regarding claim 27, which discloses the computer program version of claim 17,  
see rationale as previously discussed above.

Regarding claim 28, which discloses the product version of claim 17, see  
rationale as previously discussed above.

Regarding claim 29, which discloses the program medium version of claim 17,  
see rationale as previously discussed above.

Regarding claim 30, which discloses the system version of claim 17, see  
rationale as previously discussed above.

Regarding claim 31, which discloses similarly to claim 30 also see previously  
discussed claim above for reasoning.

Regarding claim 32, which discloses the system version of claim 18, see  
rationale as previously discussed above.

Regarding claim 33, which discloses the system version of claim 19, see  
rationale as previously discussed above.

Regarding claim 34, which discloses the system version of claim 20, see  
rationale as previously discussed above.

Regarding claim 35, which discloses the system version of claim 21, see  
rationale as previously discussed above.

Regarding claim 36, which discloses the system version of claim 22, see  
rationale as previously discussed above.

Regarding claim 37, which discloses the system version of claim 23, see  
rationale as previously discussed above.

Regarding claim 38, which discloses the system version of claim 24, see  
rationale as previously discussed above.

Regarding claim 39, which discloses the system version of claim 25, see  
rationale as previously discussed above.

Regarding claim 40, which discloses the system version of claim 26, see rationale as previously discussed above.

### **Claim Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5, 15 & 24 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brisson USPN 5,487,147 in view of Saxe et al. USPN 6,343,376 B1.

Regarding claim 5, Brisson discloses all the claimed limitations as applied in claim 1 above as well as searching the computer program for infringements of prescribed rules as it is gradually input (6:53 – 55, see locate error). Brisson doesn't explicitly disclose graphically identifying the infringements before the end of input. However, Saxe discloses in 6:39 – 44, "...generating an initial graphical representation of the verification condition by generating a tree-like graph structure called an E-graph...", also stating in (1:49 – 52) "The lack of user-friendly reporting has reduced the usability and attractiveness of conventional provers". Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine, Brisson and Saxe because, analyzing the program graphically makes the program more visual and hence more user friendly.

Regarding claim 15, which is the system version of claim 5, see rationale as previously discussed above.

Regarding claim 24, Brisson discloses all the claimed limitations as applied in claim 17 above. Brisson doesn't explicitly disclose defining the ignored infringements

by indicating a class of constructs. However, Saxe discloses equivalent classes in 14:37 – 47, as well as ignoring for purpose of analysis and search for the specific set of search patterns over the specific portions. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine, Brison and Saxe because, defining ignored infringements makes correcting and detecting infringements more dynamic and improves efficiency of the code.

Regarding claim 25, the method according to claim 17, Saxe further discloses defining the ignored infringements by indicating a class of nodes (14:37 – 47).

Regarding claim 26, the method according to claim 25, Saxe further discloses defining ignored infringements by indicating a class of nodes with sub-nodes (14:34, see subset).

### **Correspondence Information**

7. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Chuck O. Kendall who may be reached via telephone at (703) 308-6608. The examiner can normally be reached Monday through Friday between 8:00 A.M. and 5:00 P.M. est.

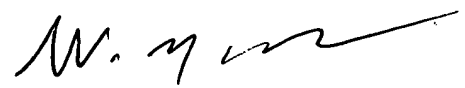
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached at (703) 305-4552.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

*For facsimile (fax) send to 703-7467239 official and 703-7467240 draft*

*Chuck O. Kendall*

Software Engineer Patent Examiner  
United States Department of Commerce



**WEI Y. ZHEN**  
**PRIMARY PATENT EXAMINER**